THE MINES OF ARIZONA

This department is under the direction of Mr. W. E. Defty, the well known mining engineer, who will carefully scrutinize all matthat only reliable information regarding legitimate enterprises shall find a place here.

The Republican would be pleased to receive information from any part of the state regarding the development of the mining in dustry. All communications should be addressed: Mining Department Arizona Republican.

COPPER PRODUCTION

WASHINGTON-Consular Assistant Leilie El Reed at London, forwards the following:

The total production of copper in 1914 was about 10 per cent less than that of 1913, according to statistics ; just compiled by H. R. Martin & However, Germany's output increased the metal.

Since the beginning of 1915 there is available for delivery before July. same as the same of the same o

n 1914 was 893,685 tons, against time before full operations have been vielding 119,957,017 lbs, copper, 1,405, 584,866 tons in 1913, a decrease of established. Start one in 1913, a decrease of established.

Start tons. The estimated production of Germany in 1914 was 30,000 tons. after the normal output had been as compared with 24,910 tons in 1913, reached N will take nearly three an increase of 5,000 tons, or about 20 months more before the ore has gone was \$6,066,143 lbs. copper, \$889,175 gratifying nature. Ore running \$8 per cent. The Austrian total in 1914 to select the ore has gone was \$6,066,143 lbs. copper, \$889,175 gratifying nature. Ore running \$8 per cent. The Austrian total in 1914 to select the ore has gone was \$6,066,143 lbs. copper, \$889,175 gratifying nature. Ore running \$8 per cent. The Austrian total in 1914 to select the ore has gone was \$6,066,143 lbs. copper, \$889,175 gratifying nature. Ore running \$8 per cent.

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in Cuba rose by about 50 per cent. and there was a larger output from Africa owing to the extension of mining in Katanga. The production is the United States declined by 40, 180 tens to 507,025; in Spain and Portugal, by 17,320 tons to 36,515 tons; in Mexico by 17,100 tons to 23,580 tons; and in Australia, by 9,580 tons to 37,000 tons."

The United States Geological Sur places the American Smelter production of copper during 1914 at 1.150,1137,182 lbs. and the refineries' output at 1,656,708,374 lbs.

Output for 1914 Estimated 10 per cent. Leading Dealers Continue to Ask 19 Cents for the Metal-Production Between 80 and 85 per cent of Normal- Normal Output Will Not be Reached

for at Least three Months

NEW YORK-While business in metal merchants of London, dealers continue to ask 19 cents for ing the year 1914 by the company the end of October. Floatation w copper metal is quiet, the leading shiring 1914 by 20 per cent and Austief prevails that buying will start 660 lbs, was made from the Miami two plants concentrated 151,893 tons

demands by belligerent counturned to normal, but this is not true. 687,378 lbs. was sold and delivered to yield was 30,210,361 lbs. copper, 148, which presumably have caused it will be recalled that when the buyers at an average price of 13.57c 459 oz. silver, and 3.369 oz. gold. the present high prices. The av- war broke out all the copper com- per pound, net cash F. O. B. New From the company's output on 17, erage price of standard copper in panies cut down their outputs and, York bused on the figures of the 1st although they have increased op-

while the price on April 15, 1915, was of the copper mines at present is 14,987 oz. gold, and 627,612 oz. silver

The Austrian total in 1914 through the refiners. Therefore, at lbs lead, 1,936,672 oz silver, and 15,- in gold and silver, and 4 percent lead, was 4,000 tons, an increase of 235 best, the output cannot be back to 769 oz. gold, from 732,829 tons of is being disclosed on crosscut 6 on the highest until late summer, at least, and possibly not before some ings totaled \$6,042,001 and \$4,500,000 to 22 percent lead, and with small

> Ray Consolidated Copper Co. The report of this company for the first quarter of this year shows of comper: 4,053,147 lbs. in January 4,836,552 lbs. In February and 5,579. 513 tos. in March. In addition to copper derived from concentrating ores there was a total of 136,742 lbs.

the smelter during the quarter. This brings the total gross produc

coarse crushing. The combined cost son and Yankee.

based on a price of 14,224c per lb. pleyed. .\$23.00 \$ of copper. All copper remaining unold at the end of the quarter has Oldw Dominian Copper Mining since been sold at an average price considerably in excess of that which the unsold was carried, and the resulting large additional earnings will appear in and as a part of the profits of the second quarter. It is the intention of the directors to resume dividend payments June 30, next.

> Phelps Dodge Co. The annual report of this com pany contained the following notes on experimental work, done to improve the recovery of metals:

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urday. Limit 15 days. No stop-overs

ore in the Sacramento hill imposes was extracted and shipped, averaging erecting a concentrator. In order to tons test mill with a capacity of 90 mixed ores. The ore last year con-

tons per day, was constructed. The best results were obtained by combined hydraulic and floatation methods, floatation increasing the mechanical recovery by about 12 per cent and raising the total saving to 87 per cent; in addition to this mill 739 and ended with \$238,520. Divi for determining exclusively the best dends to date amount to \$1,955,000. methods for handling certain of the Copper Queen ore of special composition a series of exhaustive experinents have been under way for several years in the company's laboratories and in a plant on a working 3.350,000 and 5.625,000 gallons per fine slimes, wherever the company to the Miami company. has had to resort to concentration The results are not yet sufficiently

conclusive to act on. the mines controlled by this company tons smelted direct.

The quantity of copper made dur- tioned. Very little of the red metal company's ores, and the resulting at a cest of 93,2c per ton. The fur-

each month, was £68 5s 9d., or erations productions is not yet back 654.669 tons of Copper Queen ore and 473,582. Other revenue made \$2,674,-The smelter at Douglas treated cent copper, 0.02 oz. gold and 1.01 oz. 206. Net earnings were \$978,510. Disilver, yielding 76,842,973 lbs, copper. something between 80 and 85 per The total material treated in the cent or normal and it will be some plant amounted to 1,912,177 tons. Depreciation amounted to \$752,878.

ore, precipitage and slag. Net carns the 200 level. Ore running from 16 was paid in dividends.

The yearly report states that derelopments amounted to 12,766 feet

o the rive principal mines, and 13.-609 feet in outside properties a total 30 percent copper, is being opened of 26,375 feet. Ore production was 217,876 tons | The Shattuck mine on April 14 in-

the Yankee, 128,641 from the Copper cars, of copper contained in ore shipped to Mountain, 39,310 from the Arizona each, so that the daily shipments are Central, 1,207 from the Colorado, and 400 tons per day. The ore is av-46 from the Antietam, a total of crasing 6 percent copper, Supt. Ar tion for the quarter up to 14,529,955 472.194 tons. This averaged 2,899 thur Houle in his report to the Shat per cent out of this tonnage \$59,473 tuck company says: tons was concentrating ore. Lessees was 656,652 tons, averaging 1,667 per mined 773 tons containing from 4,71 | the Shattuck mine are excellent. We cent copper. The average mill re- to 21:19 per cent copper from 13 are opening new kidneys of ore in covery was 66.08 per cent, milling mines and 61.7 tons of precipitate the old stoping territory. Much of costs for the quarter were 48.95c per averaged 52.13 per cent. Exploration this ore does not show in the drifts ton, and the average mining and on the outside properties was not en- and is opened by stoping. coarse crushing cost was 52,202c per couraging and ore reserves decreased ton, of which 3.017c was the cost of in spite of good results in the Rycr- on the Triangle fraction, and at the

per pound of net comper produced. The plast-furnace smelted a total of the ore is high grade carbonate from milling and shipping ore for of 129,530 tons of mixed charge, and and looks exceedingly promising. The the quarter was 8,874c. These costs the output of copper was 20,274,367 ore body which is now being stoped include all operating and general lbs. Net earnings for the year were out on the west side, near crosscuts \$602,319 and \$280,000 was paid in 2 and 4, on the 200 level, has opened The earnings for the quarter are dividends. There were 1438 men em- up especially well during the month,

Smelting Co., United Globe Mines and Old Dominion Co.

The combined re. ports for 1914. The last named controls the operating companies at tory. Globe. It received \$860,410 in dividends from these companies, includcopper shares, the income was \$1,415 .-009. . Out of this \$1,173,412 was distributed in five dividends totaling with a surplus of \$191.468 and ended with \$433,065. Dividends to date total

Mining operations at the United Globe property were confined to prospecting, development and are extracting or the Old Dominion. Maggie, Josh Billings, Buffalo and Grey

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Copper Queen-The development of veins. Development totaled 13.864 ft. everal million tons of concentrating A total of 155,205 tons of mined ores the company the necessity of 3.57 per cent copper, of this 121 812 was concentrating ore. The solve subordinate problems a small yield in 1913 was 167.920 tops of tained 11,086,674 lbs. copper, 91,582 oz. silver and 1,580 oz. gold.

Revenue from metals etc., was \$1, 095,561 The profit was \$432,538, Dividends amounted to \$425,500. The

The Old Dominion Copper company's report states that development totaled 17,783 feet. Some of this work was expensive and untleasant. The flow of water varied between scale, having in view the recovery by hours. The average was 3,754,542 hydraulic extraction and electrolytic gallons, of the 1,349,210,000 gallons precipitation, of the large losses in pumped, 729,580,000 gallons, were sold

The west end ore bodies supplied most of the ore. High grade oxides ore was mined here and sent direct The total copper ore extracted from to the smelter. The center part of the mine produced most of the conamounted to 1,777,243 tons, of which centrating ore. Ore extracted totaled 1,046,728 tons was submitted to pre- 129,813 tons, averaging 7.44 per cent liminary concentration and 730,515 copper, cost of mining was \$5.20 per ton, an increase due to troubles men In trade circles the be- was 140,231,384 lbs, of which 8,569,- considerably increased extraction. The produce in blister copper was de- naces reduced 207,595 tons of charge been a general and steady in- There has been some talk that livered to them. Including copper costing \$2.669 per ton of new charge rease of production owing to the the production of copper has re- received from outside source; 188,- smelted. Including custom ores the 816.284 ibs., 33.311 oz. and 602 oz. respectively, the revenue was vidends amounted to \$445,500. Tie year started with a surplus of \$1, 193,247 and finished with \$967,293

values in gold and silver, is being neys of good copper ore are being er countered. In crosscut 23, on the 500 level high grade ovide ore, running

from the Ryerson mine, 85,119 from creased its daily shipments to eight

"We are getting good developments north end of the Leo claim. Most between the 200 and the 300 levels "We have developed a continuous ore zone 250 feet long, which wiff

average better than eight feet wide and all of it will assay between 6 and percent copper. The ore is continuing southward, and looks very covering these products has just been promising for a big ore shoot in the southwest claim, in this west terri-

Ajo Railroad Bids for the construction of this railroad is now called for and it is expected contracts will be closed early in June. As is well known, the road \$4 per source. The year commenced will be built to serve the old Ajo copper property, now known as the New Cornelia Copper Co. It is the desire of the company to have the road completed as early as possible and with the least expenditure of capital and this is why the point on the S. P. was selected. Some of the contracts for material have already Th incorporation of the company

was filed a couple of weeks ago, with a capitalization of \$3,600,000. The length of the railroad is about 45 miles and there is little rock work or heavy grading, the heaviest being at the approach to the mine

Clara Consolidated ployed at this property at Swansea and some good grade of ore is being extracted and shipped to the smelter

Tombstone

at Humboldt

ontinuously

This camp is taking on an air of ound substantiality and at present about 400 men are employed around the works and this is only a commencement. The mill is being got ready for starting and should soon be in operation and it is very possible the working forces will be increased

The old town itself is wearing ery busy air. The number of people of the district's activity.

Beats Mule Power William Blount, who has a quarty

laim near the Lynx creek crossing which yields a good grade of ore, is his own miner and mill man. As matter of fact, the mill is a newfangled arrasta, run by gasoline pow A small engine makes the drags whirl about six times as fast as can the traditional and trusty male, and in addition to the usual method of rrasta amalgamation. mating plate is used. It is stated that the gasoline costs about two bits day-which is cheaper than a hay burner, by long odds, as about on ton of ore a day is treated.-Prescott Courier.

High Grade Ore Discovered Word comes from Parker that a and one of the deacons in his rich strike has been made 12 miles church.' — Richmond Times-Dissouth of Vidal, Vidal is about 24 patch.

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niles from Parker. The find is said o have been made by George Owens and some very imposing figures are given. The ledge is reported to be 15 nigh as \$275 per ton.

PRODUCTION OF TUNGSTEN

Output the Past Season is Smallest During the Past Five Years and

Mines Have to go Deeper The production of tungsten ores in he United States during 1914 is esimated as equivalent to about 996 short tons carrying 60 per cent. reliminary figures collected by Frank . Heas of the United States Geoligical Survey, which are thought to b curate within 5 per cent. This utput is the smallest since 1968. when only 671 tons was produced. In 1913 the production was 1537 tons, or which 953 tons was ferberite from the almost equal to that of the whole country in 1914, but the production the Boulder field in 1914 was only

466 tons. Prices ranged from \$6,50 to \$9.00 'unit" (that is, so much a short tor oxide,) depending on the quality and quantity of the ore and the urgenc

Of the various tungsten mineral the one produced in larget quantity was scheelit, from the Atolia district. little sheelite was also mined in the Deep Creek mountains, Utah, Small quantitis of both wolframite and sol nerite were shipped from Arizona, and hubnerite was produced on Patterson Creek, in th Plue Wing district Llano. Some Wolframite was pro-Ivanpah. Cal

The more easily mined tungster are now largly worked out in the older districts, and mining is thus becoming more difficult and expengive this is especially hard on the

The European war disturbed tungsen mining as it did most other lines f business, and has had much to do with the reduced output, but the imports of ore, tungsten, and ferrotungten, as shown by the figures officeted by the Bareau of Foreign and Domestic Commerce, have been affected even During the year 267 tons of ore, valued at \$139,697, were import ed. against 491 tons, valued at \$213,

122, in 1913. During 1913, 661 ton of tungsten metal and ferrotungster valued at \$835,212 were imported. In 1914 these imports dropped to 192 ons, valued at \$219,506.

INDEPENDENCE MINE SOLD

amous Gold Producer of Cripple Creek Said to Have Been Pudchased by the Portland Co.

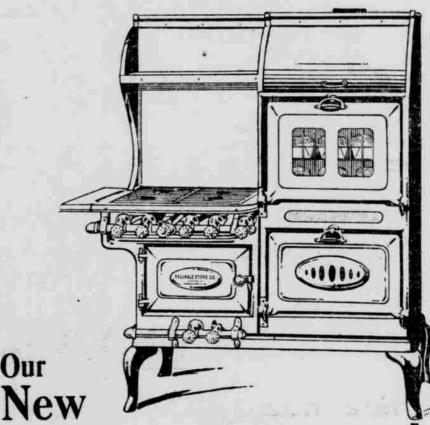
COLORADO SPRINGS, May 22,-The sale of the Stratton Independence to the Portland Gold Mining ompany was reported today from ap parently reliable sources. Officials of the Portland company declined to a firm or deny the report, which stated that the sale had been ratified at . meeting this week of the directors of property.

The Stratton Independence was last sold to the English syndicate for \$11-00,000, by the late W. S. Stratton

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